ABSTRACT OF THE DISCLOSURE

An antenna switch diversity algorithm, and systems and methods to provide antenna

diversity by implementing the algorithm in, for example, an IEEE 802.11a compliant

5   environment, are presented. In accordance with the algorithm, one antenna of at least two

antennas is designated as a default antenna at a communications device that sends and receives

transmit and receive packets. The default antenna designation is changed depending on long-

term and short-term learning processes implemented in, for example, software and hardware.

The long-term and short-term learning processes analyze packet transmission and reception

10   results of the antennas. The antenna switch diversity algorithm is applicable to multiple

antennas.